

A three-month extension of time to respond to the Office Action is respectfully requested. A Petition for Extension of Time and the appropriate fee are being filed concurrently with this Amendment B.

Please amend the subject patent application as follows:

In the Claims

Please cancel Claim 14. Please amend Claims 11, 15 and 24. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - ii).

11. (Twice Amended) A method of identifying a gene or genes involved in transcription-dependent memory comprising the steps of:
- (a) training *Drosophila* to induce transcription-dependent memory formation in said *Drosophila*;
  - (b) extracting RNA from head tissue of *Drosophila* trained in step (a);
  - (c) synthesizing labeled cDNA probes complementary to the RNA extracted in step (b);
  - (d) hybridizing the DNA probes synthesized in step (c) to microarray chips containing DNA sequences from genes of the *Drosophila* genome under conditions appropriate for hybridization of the DNA probes to complementary DNA sequences on the microarray chips, wherein a signal is produced from said labeled probes upon hybridization of said probes to complementary DNA sequences;
  - (e) detecting the signal produced in step (d); and
  - (f) performing a statistical comparison between the signal detected in step (e) and the signal detected in a control for each gene, wherein said control is obtained according to a method comprising the steps of:
    - (i) training control *Drosophila* to induce transcription-independent memory formation but not transcription-dependent memory formation in said control *Drosophila*;

- (ii) extracting RNA from head tissue of said control *Drosophila* trained in step (f)(i);
  - (iii) synthesizing labeled cDNA probes complementary to the RNA extracted in step (f)(ii); and
  - (iv) hybridizing the DNA probes synthesized in step (f)(iii) to microarray chips containing DNA sequences from genes of the *Drosophila* genome under conditions appropriate for hybridization of the DNA probes to complementary DNA sequences on the microarray chips, wherein a signal is produced from said labeled probes upon hybridization of said probes to complementary DNA sequences.
15. (Amended) The method of Claim 11 wherein transcription-independent memory formation is induced using a massed training protocol.
24. (Twice Amended) A method of identifying a gene or genes involved in transcription-dependent memory comprising the steps of:
- (a) training *Drosophila* to induce transcription-dependent memory formation in said *Drosophila*;
  - (b) extracting RNA from head tissue of *Drosophila* trained in step (a);
  - (c) synthesizing labeled cDNA probes complementary to the RNA extracted in step (b);
  - (d) hybridizing the DNA probes synthesized in step (c) to microarray chips containing DNA sequences from genes of the *Drosophila* genome, wherein a signal is produced from said labeled probes upon hybridization of said probes to complementary DNA sequences;
  - (e) detecting the signal produced in step (d); and
  - (f) performing a statistical comparison between the signal detected in step (e) and the signal detected in a control for each gene, wherein said control is obtained according to a method comprising the steps of:

- (i) extracting RNA from head tissue of control *Drosophila*;
- (ii) synthesizing labeled cDNA probes complementary to the RNA extracted in step (f)(i); and
- (iii) hybridizing the DNA probes synthesized in step (f)(ii) to microarray chips containing DNA sequences from genes of the *Drosophila* genome, wherein a signal is produced from said probes upon hybridization of said probes to complementary DNA sequences.

### REMARKS

#### Information Disclosure Statement

A Supplemental Information Disclosure Statement (IDS) was mailed to the Patent Office on December 18, 2001. The references cited in the Supplemental IDS were cited in the International Search Report in a counterpart foreign application. Consideration and entry of the Supplemental IDS is respectfully requested.

#### Paragraph 2: Restriction Requirement

The Examiner has maintained the restriction requirement. Applicants are filing concurrently herewith a Petition under 37 C.F.R. § 1.144. Reconsideration and withdrawal of the restriction requirement for the reasons set forth in the Petition are respectfully requested.

#### Paragraphs 4 and 5: Rejection of Claims 11-15 and 24-26 Under 35 U.S.C. § 112, Second Paragraph

Claims 11-15 and 24-26 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Certain claims have been amended in response to the rejection. The amendments are not intended to narrow the scope of the claims. As amended, the claims even more particularly point out and distinctly claim the subject matter which Applicants regard as the invention, thereby obviating this rejection under 35 U.S.C. § 112, second paragraph.